

Our Reference: CSA-101-B

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Henry Colombo and Bernard M. Licata  
Serial Number: 10/039,805  
Filing Date: October 19, 2001  
Examiner/Art Group Unit: Dunwoody, Aaron M./3679  
Title: METHOD AND APPARATUS FOR  
FORMING LEAK-PROOF COUPLING FOR  
BEVERAGE DISTRIBUTION SYSTEM

DECLARATION UNDER 37 C.F.R. §1.132

Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450

Sir:

I, Henry Colombo, do hereby declare that:

1. I am one of the inventors of U. S. Patent Application Serial No. 10/039,805.
2. I am President of Colombo Sales and Engineering, Inc. which provides pneumatic tube systems for business and industry, and beverage chase systems for the beverage and food service industries.
3. I have over forty (40) years experience in the design, development, manufacture and installation of pneumatic tube systems and related tubing and piping technology. Further, I have had experience with the beverage and food service industry for the past five (5) years.
4. Beverage chase systems are products designed and developed specifically for the beverage and food service industry. The "Beverage Chase" is the pathway or chase-way or conduit, through which a "bundle" of plastic and/or copper

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beverage or food lines" that deliver beer, soda and other liquid edible products from a remote storage facility to the service area or point of use, are pulled.

5. The beverage and food service industries require the interior surface of the chase or conduits to be smooth. Most critical is the interior surface of the joint or join connecting together two aligned conduits or chase components that must also provide an interior surface that is smooth and uninterrupted by any obstruction for the pull through of these bundles of lines.

6. The joints or joins must be strong enough to bear the pull of the "bundle of plastic and/or copper beverage lines" that can reach a length of as little as twenty (20) feet to over one thousand (1,000) feet. These bundles of lines impose a significant stress on the 'beverage chase' through which they are pulled. The joints or joins must remain leakproof after the imposition of this significant applied stress.

7. I have reviewed U. S. Patent No. 5,505,497 issued to Shea et al. on April 9, 1996 for a mechanical joint connection for fiberglass reinforced duct sections, which was brought to the attention of my attorney during an Examiner interview on May 8, 2003.

8. The reference '497 specifically states in Column 5, Lines 5 - 16, that a gasket member fit over the ends of the duct sections which are coated with a Novolac resin, a high cross-link density ceramic-filled coating. The gasket flanges protrude inside the joined fiberglass reinforced duct sections.

9. The reference '497 specifically states in Column 6, Lines 18 - 30, that the gasket member may be replaced with a relatively heavy layer of Novolac resin which may be applied in layers.

10. The reference '497 discloses either a gasket portion or a thick layer of Novolac resin which extends into the interior of the conduit.

11. Accordingly, the joint connection of reference '497 does not provide a smooth interior surface.

12. Further, Novolac is a 100% solid epoxy product that is coated onto the duct ends and which is messy and more labor intensive to install at a field installation or construction site, because Novolac is a liquid, two-part epoxy that must be mixed in the proper proportions, and possibly with other materials such as ceramic powder or glass beads and applied. Also, Novolac may optionally be applied in multiple layers for certain applications.

13. The claimed invention uses a pre-cut double-sided (double-coated) adhesive closed cell acrylic foam tape that is applied only to the exterior surfaces of the conduits or chase components thus maintaining a smooth interior surface of the conduits at the joints. The pre-cut, double-sided (double-coated) adhesive, closed cell, acrylic foam tape simplifies installation and reduces field labor and costs.

14. The claimed invention uses a double-sided (double-coated) adhesive, closed cell acrylic foam tape that provides a tensile strength at 80 - 110 lbs/in<sup>2</sup> to allow bundle pull-through without physical damage to the joint.

15. The claimed invention uses a double-sided (double-coated) adhesive, closed cell acrylic foam tape that provides a static sheer of at least 1000 grams at 72° and 500 grams at 150°F.

16. The claimed invention uses a double-sided (double-coated) adhesive, closed cell acrylic foam tape that allows installation of the joints at temperatures as low as 32°F.

17. The claimed invention uses a double-sided (double-coated) adhesive, closed cell acrylic foam tape that provides a leak-proof seal.

18. Items 14 - 17 are supported in the attached Technical Data Sheets of the VHB™ Double Coated Acrylic Foam Tapes and Adhesive Transfer Tapes by 3M Company.

19. The use of the double-sided (double-coated) closed cell acrylic foam tape has provided unexpected and superior results during installation of the beverage conduit, wherein the joints withstood approximately 3000 lbs. of pull pressure without damage.

20. The claimed invention enjoys commercial success as evident in the attached 3M Industrial Adhesives and Tapes Case Study titled: Unique Leak-proof Beverage Conduit With Easy Assembly and Smooth Pull Through for Fluid Lines.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under § 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

By:

  
HENRY COLOMBO

Date:

6-17-03